USGS has done extensive monitoring and analysis of surface and ground water quality in the Ozark Plateau study area as part of the National Water Quality Assessment Program (NAWQA). Major findings for the Ozark Plateau study area are available at http://ar.water.usgs.gov/nawqa/ozark/findings.html. Some of the major findings include:

- Nutrient concentrations in streams are higher in areas with greater agricultural land use or downstream from wastewater-treatment plants than in forested areas. These higher concentrations may result in increased algal growth in streams.
- Nutrient concentrations in ground water are higher in areas with greater agricultural land use than in forested areas. These higher concentrations seldom exceed drinking-water standards.
- Bacteria concentrations in streams are higher in basins with greater agricultural land use (mostly pasture). Fecal coliform bacteria concentrations occasionally exceed State water-quality standards for whole-body contact recreation.
- Nutrient and bacteria concentrations are affected by hydrologic and geologic factors. Stream discharge and the presence or absence of confining geologic layers are two factors that are important in predicting concentrations.

Under contract with the Arkansas Natural Resources Commission (ANRC), the University of Arkansas Department of Biological and Agricultural Engineering (2005) used the soil and water assessment tool (SWAT) to model priority watersheds for the 2005-2010 NPS Management Program. Figures 4a-4d use SWAT estimates of sediment, run-off, and nutrient loads for phosphorus and nitrogen for some sub-watersheds in the Illinois River watershed to show the relative loading in quintiles for each sub-watershed, which roughly approximates the area of a 14-digit Hydrologic Unit Code area.

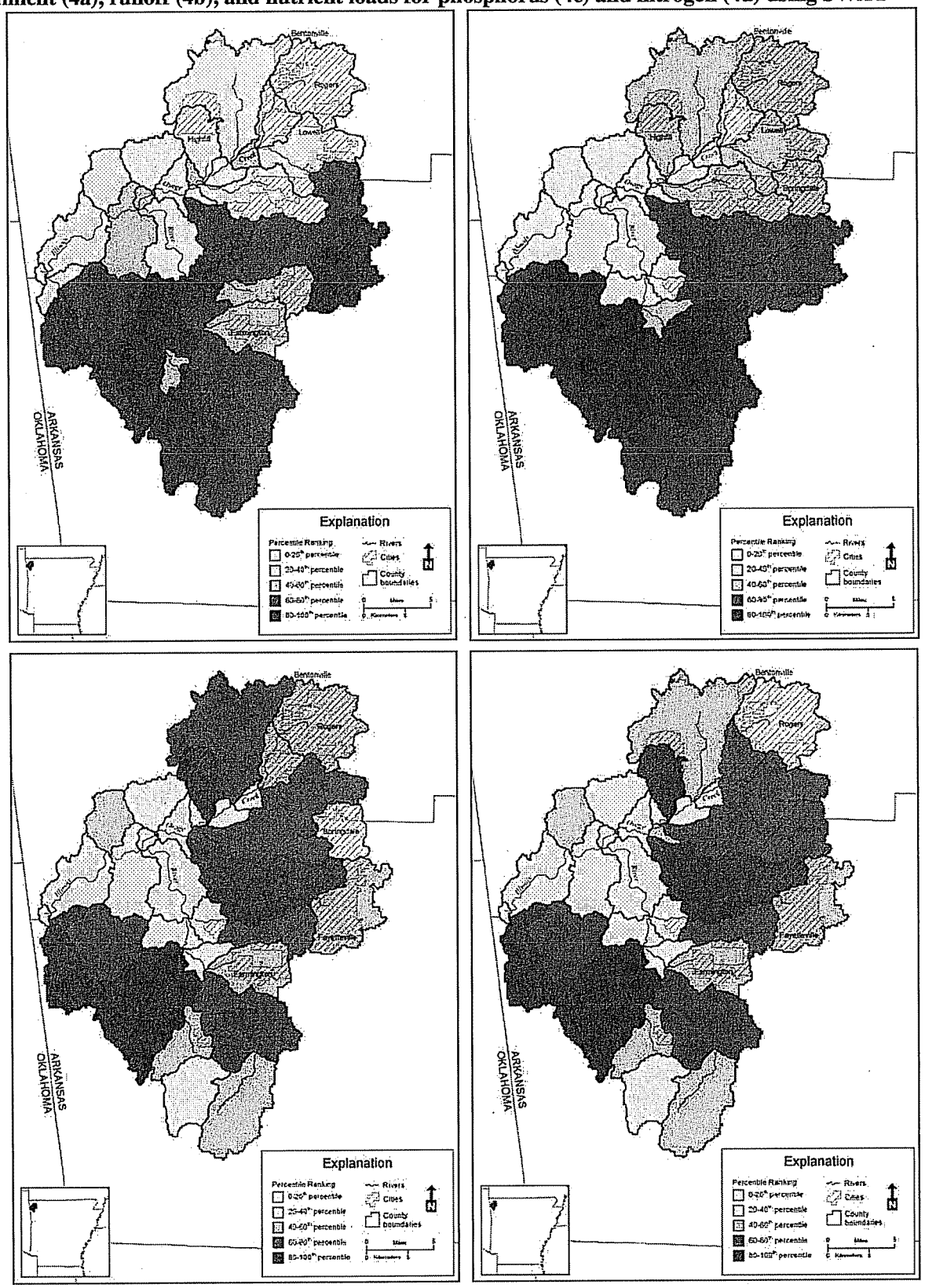
Section 4 - Project Objectives

The implementation of the project will restore 100-foot to 300-foot corridors along streams that will provide habitat for terrestrial species in the project area such as wood ducks, quail, deer, cottontail and swamp rabbits, along with migrant and resident songbirds. Forested riparian buffers will provide new wintering habitat for woodcocks, rabbits, deer and neotropical migrants that are edge species such as warbling vireo, white-eyed vireo, painted bunting and indigo bunting will benefit from the 100'-300' buffers. Forest interior species such as red-eyed vireo will benefit from the 300' buffer, but buffers recommended to benefit interior species are often much wider.

Quail will benefit tremendously from the restored buffers once the hardwood trees are older and have attained mid-story status and the native warm-season grasses have become established. Wood duck populations should improve dramatically, however, because of the long growth requirements of hardwoods, improvements can not be determined over the short-term. Estimated long-term population increases of the wood ducks in the watershed is expected to increase by a minimum of 50% due to quality nesting habitat.

The goal is to increase wildlife populations of the above listed species by an average of 25% over the course of 30 years.

Figures 4a-4d: Relative estimates of contribution of Illinois River sub-watersheds to total estimated sediment (4a), runoff (4b), and nutrient loads for phosphorus (4c) and nitrogen (4d) using SWAT



Source: University of Arkansas Department of Biological and Agricultural Engineering, 2005.

Streamside buffers will help to filter sediments and nutrients from agricultural fields and result in water quality improvements. Typical buffer widths recommended for water quality improvement range from 50' to 100' although some range as low as 25' and up to 900'. It is estimated that water quality will be improved by at least 30%.

Through implementation of this project, sediment loading will be reduced by an estimated 10,000 tons per year.

Section 5 - Project Description

A major impediment contributing to past failures has been that forested areas along the stream could not be signed up in USDA riparian programs even when they were small components of an otherwise un-forested buffer. Landowners do not want to pay for and maintain a fence at their expense as it crosses through forested areas. In the proposed Arkansas CREP program, monies will be available to pay for fencing and alternative water sources so ranchers fencing livestock out of the stream will still have access to water.

Additionally, strict guidelines concerning the width of riparian buffers sometimes deter otherwise willing landowners if the configuration of the stream is such that they will have trouble maneuvering equipment within the riparian zone or maintaining fences through frequent floods. Another deterrent to participation has been the inflexibility of federal programs concerning management of riparian zones. A state-designed CREP program in conjunction with existing conservation programs (with modifications) will overcome these obstacles.

These expanded riparian widths are needed to serve as a functional travel corridor for associated neotropical songbirds along with resident species of birds, mammals, and other wildlife. In agricultural landscapes, maximum numbers of the most area-sensitive species peak in streamside management zones of at least 91 m (300ft) (Keller et al., 1993; Hodges et al., 1995).

The State of Arkansas proposes a program that will overcome all of these obstacles and be highly successful. The major components of the Arkansas CREP program will be the same riparian practices that have proven to be successful in Section 319 of the Clean Water Act projects, with some modification. Livestock will be prohibited access to the stream and alternatives will be presented to the producers that provide all the services they were realizing from the stream prior to project implementation.

Livestock access to streams will be limited through fence construction. In northwestern Arkansas where the terrain is very hilly, pastures often contain many small groves of trees in small narrow ravines and other areas that physically inhibit the operation of equipment necessary to maintain the pasture. Many USDA riparian programs do not subsidize the installation and maintenance of fence through these treed areas and livestock producers have been hesitant to take on this responsibility themselves. The State proposes that the Arkansas CREP program should cost-share fencing through these treed areas at the same rates that federal money cost-shares fencing in pasture. The cost list of accepted practices can be found at the end of the document as Attachment A.

Adjustments from CP22 and CP29 critical to program adoption have been determined to be:

1. Stream bank stabilization will be implemented before riparian vegetation is restored or established and will be allowed at a cost-share rate of 50%.
2. The minimum combined width of zones 1 and 2 will be equal to 30% of the width of the geomorphic floodplain but never less than 50 feet or greater than 100 feet. This is the MINIMUM width for the buffer to function properly – the landowner must install this much. Then he/she can choose to install additional buffer out to a 300-foot program MAXIMUM (CP22). Additional buffer can be enrolled under the infeasible to farm definition (includes infeasible to graze).
3. The infeasible to farm definition will also apply to CP29 (infeasible to graze). Producers may request a waiver to enroll infeasible to farm/graze in excess of 25%.
4. Winter feeding facilities composed of a covered heavy-use area (558 - Roof Runoff Structure) combined with a dry manure storage area (313 - Waste Storage Facility) and a cement water tank will be allowed at a cost-share rate of 50%. These facilities will be constructed out of the geomorphic floodplain. They will be a combination of NRCS practices 561 and 313 with a roof over the heavy use area.
5. Alternative water sources may be developed within 1,500 feet of the edge of zone 3 with County Committee approval to encourage upland pasture use for grazing and flood plain pasture use for haying.
6. Watering facilities will allow up to 1,500 feet of pipeline with County Committee approval.
7. The maximum dollar amount allowed for water development, water facilities and pipeline, $3,000, $2,000, and $2,000 respectively, will be per ½ mile of stream rather than per contract.
8. When two eligible tracts are separated by a wooded area, fence through the treed area will be allowed at a cost-share rate of 50%.

In summary, these practice modifications accomplish the following:

- Providing stable stream crossings for livestock and equipment;
- Stabilize the stream banks, thereby reducing the sediment load into receiving water bodies, decreasing the amount of soil-borne contaminants reaching local water bodies, and increasing the survival of existing or re-established riparian vegetation;
- Fencing will protect the vegetation and stream banks until the project site becomes stable; and
- Construction of winter feeding areas to replace the ravines and hollows that are currently used. The winter feeding areas allow manure to be stockpiled out of the rain (until it can properly be land applied), allow the cattle protection from the wind, protect soil in the heavy use areas, and provide an alternative water source for livestock.

Project Size

The Illinois River Watershed contains approximately 1.1 million acres of which approximately 484,514 acres (44%) are in Arkansas and approximately 615,486 acres (56%) are in Oklahoma. The proposed CREP will attempt to protect 15,000 acres of riparian area in the Illinois River Watershed of a total riparian area of approximately 146,462 acres. The targeted area is land lying adjacent to perennial and intermittent streams that is currently in cropland or pasture.

Likelihood Project Objectives will be Met

By providing a significant state incentive coupled with the federal cost-sharing and 15-year CRP rental payments, landowners in the watershed will find the proposal attractive enough to enter the program. It is expected that the level of participation will be limited only by project funding. At least 25% of the eligible landowners, representing 25% of the eligible land area, will participate.

Length of Time for Project Implementation

It is anticipated that all contracts will be signed within 3 years of the project opening date. The contracts will have a 15-year lifespan. On all approved CREP contracts, landowners will be given the opportunity to enroll CREP lands in perpetual easements.

All landowners enrolling eligible land into the Illinois River CREP will be given the opportunity to place a perpetual conservation easement on enrolled acres through the easement portion of this proposed CREP. Perpetual easements are <u>not</u> a required component of the Illinois River CREP. This portion of the CREP will allow landowners to obtain permanent easements soon after the practice is completed and verified as successfully established.

The State of Arkansas will be designated as the "Easement Manager" and be the primary holder of the permanent conservation easements. Arkansas natural resource agencies may assist in easement boundary marking and monitoring easements during and beyond the initial 15-year CREP contract period.

Interagency Coordination Method

The Arkansas CREP proposal is being developed by the natural resource agencies of Arkansas and the state offices of NRCS and FSA. The Arkansas Natural Resources Commission is the state Conservation District agency. The Governor's office has been represented. EPA Region 6 staff is supportive of the project. Their commitment to protecting and restoring water quality in the project area has been demonstrated by continued Section 319 funding in this watershed. Meetings have been held with State and Federal and local natural resource agencies operating in Arkansas (U.S. Geological Survey, Arkansas Natural Resources Commission, Arkansas Department of Environmental Quality, Farm Service Agency, Winrock International, Arkansas Game and Fish Commission, Natural Resources Conservation Service, Arkansas Natural Heritage Commission, University of Arkansas Cooperative Extension Service, Arkansas Forestry Commission).

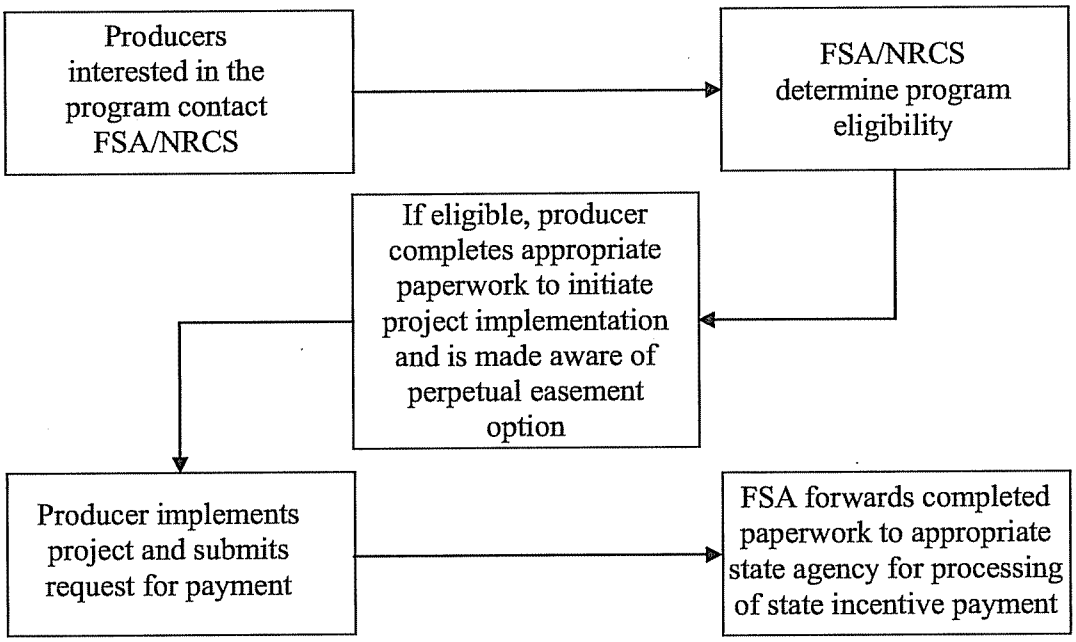
The following agencies and organizations will serve on a committee to develop on-going outreach and general public education of the program: Arkansas Natural Heritage Commission, Arkansas Game and Fish Commission, University of Arkansas Cooperative Extension Service, Arkansas Natural Resources Commission, Arkansas Forestry Commission, USDA Natural Resources Conservation Service, Arkansas Department of Environmental Quality, and Arkansas Stream Teams

Eligible Land

Landowners with pasture and/or cropland adjacent to streams, rivers, or lakes in the selected watersheds will be eligible for the program. The land in question must have been owned or operated by the applicant for the previous twelve months. Cropland must have been planted to a crop four of the previous six years and be physically and legally capable of being cropped. Marginal pastureland may also be enrolled provided it is suitable for use as a riparian buffer planted to trees or as wildlife habitat buffer. Lands that have an existing CRP contract or an approved offer with a contract pending are not eligible for CREP until the previous contract expires.

Landowners interested in the program will receive a site visit from an NRCS plan writer, who will update the existing conservation plan, or draft a new one to address the objectives of the program. If the landowner agrees to implement these recommended practices and provide the required match, their application will be accepted, along with other applications received during the sign-up period.

Application Process



Section 6 - Cost Analysis

The proposed Arkansas CREP program is expected to cost approximately thirty million dollars of Federal, State, and local landowner monies. This program has been developed using lessons learned from past implementation of riparian buffer programs in these areas of the State. Certain modifications have been made to standard BMPs to make them more amenable to local landowners while retaining their efficiency at improving water quality. Certain types of land that would not regularly qualify for inclusion in a CRP program could be eligible for this CREP program. The State of Arkansas believes inclusion of these lands are critical to the success of the program in these areas. The State will provide personnel to provide technical assistance and promotion of the program, monitoring to assess water quality improvements associated with the program, and reporting to summarize project results and progress.

Total Estimated Project Costs

Watershed	Targeted Acres	Cost of Installation & Maintenance	CREP $'s	State Match	State $'s	State Total	Project Total
Illinois River	15,000	$24 mill.	$24 mill.	$3 mill.	$3 mill.	$6 mill.	$30 mill.

Estimated Costs of First Year and Years 2 through 15

County	Pasture Rental Rate per Acre	Additional Pasture Rental Rate	SIP Pymt. per Acre	Maint. Pymt. of $9/Acre	Total/Acre First Year	Pymt./Ac./Yr. for Years 2-15	Pymt./Ac. for 15-Year Contract
Benton	$38	$38	$100	$9	$185	$85	$1,375
Washington	$34	$34	$100	$9	$177	$77	$1,255
Crawford	$32	$32	$100	$9	$173	$73	$1,195

State contributions to the program will be:

1. The State of Arkansas will provide water quality monitoring for the life of the program to document project effectiveness. This will include, where necessary, installation of stream flow gages and automatic samplers programmed to collect flow-weighted chemical loading data. It will also include the staff to operate the equipment, as well as, the associated laboratory costs. Biological data on the fish and macroinvertebrate communities and aquatic habitat conditions will also be collected.
2. The State of Arkansas will provide technical assistance where applicable during the implementation and monitoring phase of the project.
3. The State of Arkansas will make a one-time lump sum payment of $200 per acre to all landowners who participate in the program.
4. The State of Arkansas will allow participants to utilize the Wetlands and Riparian Zones Tax Credit Program to offset eligible out-of-pocket expenses related to their CREP project.

State of Arkansas

The State of Arkansas is prepared to contribute $3,000,000 of in-kind services to the proposed project and $3,000,000 of the required cash match, as outlined by federal guidelines necessary for implementation of the proposed project.

The Illinois River CREP will enable cooperators to tailor the program to meet the needs of both the State and the local watershed stakeholders and allow it to be a very successful riparian buffer program.

Justification for Incentive Payments

Successful Section 319 programs have conclusively shown that a program of this nature can reduce phosphorus loading in both a statistically and environmentally significant manner. Without this assistance, agriculture and the poultry industry will not be able to both protect the environment and keep the rural economy vibrant and growing.

Because these waters are currently listed as not attaining water quality standards, the state will have little choice other than to burden agriculture and related industry with additional regulations if water quality does not begin to improve. Given the current condition of the agricultural industries, they will not survive significant additional costs such as these.

Three Year Average Crop Acreage and Yield- Source – 2002 Ag Census

	Benton		Crawford		Washington	
Crop	acres	yield	acres	yield	acres	yield
Corn-grain	0	0	2,823	316,110	0	0
Cotton-upland	0	0	0	0	0	0
Hay-alfalfa	639	1,796	372	withheld	787	1,871
Hay-other	withheld	withheld	withheld	withheld	withheld	withheld
Peanuts	0	0	0	0	0	0
Sorghum-grain	withheld	withheld	2,047	146,250	0	0
Soybeans	482	11,630	9,056	250,506	0	0
Wheat-all	1,213	43,928	4,230	162,756	173	5,672

Section 7 - Monitoring Program

Water quality stations are established at various locations in the watershed. Samples will continue to be collected monthly and transported to the Arkansas Department of Environmental Quality laboratory. Analyses include ammonia, nitrate/nitrite, total Kjeldahl nitrogen, chloride, sulfate, bromide, fluoride, total hardness, total organic carbon, biochemical oxygen demand, dissolved oxygen, pH, turbidity, total suspended solids, total dissolved solids, ortho-phosphorus and total phosphorus. ICP metals analyses are performed every other month. Other parameters may be added as information, science and public policy dictate. This type of monitoring has been shown to be extremely effective at detecting changes in water quality and should allow us to detect effects of the program.

All monitoring will be carried out by staff of the Arkansas Department of Environmental Quality, the Arkansas Forestry Commission, the Arkansas Game and Fish Commission, and the Arkansas Natural Resources Commission. Data will be compiled and analyzed by Game and Fish Commission staff as well. AFGC staff will be responsible for preparing and submitting annual monitoring reports.

Because State agencies have successfully carried out smaller but similar projects in all of the target areas, we anticipate that objectives will be met. Should the data at any time indicate otherwise, additional modeling and monitoring will be performed to locate the pollutant contributing sub-watersheds and land use practices. If any are identified, they will be corrected using a combination of state, landowner and EPA Clean Water Act Section 319 money.

Section 8 - Public Outreach and Support

Various state and federal natural resource agencies administer conservation programs similar to the one proposed. These programs have been extremely successful, both in terms of sign-up and in the environmental benefits gained. As time progresses, and word spreads among local producers, we find that new money is obligated as soon as it becomes available. Currently, there are large backlogs of landowners waiting for cost share assistance to become available.

A public meeting was held at the Ozarks Electric Co-Op Corporation in Fayetteville, Arkansas on February 15, 2007 to give producers the opportunity to review and comment on the Illinois River CREP Proposal. Approximately 60-70 individuals representing various interest groups were present. Overall response to the proposal was favorable. The primary concern voiced at the meeting was that the proposed project be as flexible as possible in order to accommodate as many producers as possible. The proposal was developed with flexibility as a primary guiding principle.

Riparian area and buffer protection and establishment are two of the most important practices needed to improve water quality. While some of these areas are currently protected through contracts written under the Section 319 program, these contracts will soon expire. Even more riparian areas are unprotected or currently in pasture with eroding streambanks because of lack of funds to meet the demand and because of lack of interest in short-term contracts.

The State Cooperative Extension Service has also been a long-time promoter of the benefits of riparian buffer systems. University of Arkansas Division of Agriculture contribution to the Illinois River Basin CREP will be:

- Contribute $400,000 in development funding toward applied demonstration and research activities. These funds would be in direct support of evaluating and promoting alternative management practices and the educational effort necessary to landowner participation in the CREP project.
- Design and deliver a credible and effective landowner education program with respect to the value and application of the Illinois River Basin CREP program to

individual farm situations. Utilize the County Extension Agent delivery system of Washington and Benton Counties and associated citizen networks to strengthen the public and landowner understanding of the CREP project and its value to both landowners and the environmental health of the region.

- Work cooperatively with partnering agencies and organizations in the watershed to develop a network of supporting technical and planning assistance providers.
- Develop working demonstration and educational outreach sites through the resources of the University of Arkansas Division of Agriculture and the Dale Bumpers College of Food and Life Sciences (included is significant working farm acreage within the Illinois River watershed).
- Assist in assessing the effectiveness of individual and complementary Best Management Practices and evaluating the overall effectiveness of the water quality improvements generated by the CREP.
- Utilize the full complement of diagnostic tools, laboratories and research based knowledge available through the University of Arkansas System in support of the CREP management plan and its successful implementation.

It is important to recognize the different circumstance existing in the Illinois River Watershed and that found in all other CREP project efforts in Arkansas to date. Landowners in the Illinois River Watershed have limited association with cost share programs, long term agreements, easements and other associated conservation programs found in the current USDA Farm Program. They are also in a rapidly developing area with increasing land values. This competition for land use and reluctance on the part of landowners to make long term commitment (potentially limiting future development opportunity) necessitates a CREP project supported by a sophisticated educational program and accompanying economic evaluation of alternatives, developmental limitations and environmental liabilities and benefits. The University of Arkansas Division of Agriculture is uniquely qualified and capable of providing this needed educational support and to conduct synergistic research within the Illinois River Watershed and across the state at the Arkansas Agricultural Research and Extension Centers. The system provides the opportunity to conduct a series of applied research and education demonstrations. Some of the potential opportunities are listed below:

1. Hydro-Geomorphic Restoration of Flowing Waters: Improving Ecological Services
2. Increasing water storage for flood control
3. Restoring sediment transport integrity
4. Increasing stream nutrient retention and biotransformation
5. Increasing aquatic health and aesthetic appearance
6. Animal Behavior Response to Alternative Water Supply and Limited Stream Access
7. Improving Aquatic Health and Water Quality in Adjacent Streams
8. Tracking cattle movement and behavior using GPS
9. Using off-site solar water systems to utilize natural water systems and enhance grazing distribution
10. Evaluating biotic integrity, fecal bacteria and in-channel chemistry

11. Riparian Buffer Zones (Three Zone System) to Improve Water Quality: Retention Efficiency from the Edge-of-Fields to the Aquatic System
12. Monitoring sediment, nutrient and bacteria transport at various stages and with different grazing management strategies in the grass buffer and riparian zone
13. Evaluating stream nutrient retention using whole-reach experimentation
14. Evaluating gentrification potential at various stages through the three zones
15. Simulating (modeling) the effectiveness of riparian buffers at the watershed scale
16. Increasing wildlife habitat and aesthetic value
17. Wetland Use and Restoration: Improved Downstream Water Quality
18. Increasing water storage during episodic storm events
19. Reducing sediment, nutrient and bacteria transport
20. Evaluating gentrification potential to mitigate nitrate loss
21. Chemical remediation to increase the longevity of phosphorus removal
22. Diet, Forage and Grazing Management: Improved Downstream Water Quality
23. Reducing sediment, nutrient and bacteria transport
24. Identifying alternative forages and their management needs
25. Managing cattle numbers to maximize infiltration
26. Monitoring edge-of-field losses and BMP effectiveness
27. Reducing feed supplements in cattle and its effect on manure
28. Evaluating the use of byproduct feeds such as distiller's grains on manure

Actual applicable research and demonstration activities conducted by the University of Arkansas Division of Agriculture are dependent upon the final design of the CREP.

Section 9 - Development of Procedure

The procedures in Attachment B have been developed jointly between the Farm Service Agency (FSA) and the Natural Resources Conservation Service (NRCS) in the Arkansas state office to lay out the various steps for implementing the Continuous Conservation Reserve Program (CCRP) more clearly (Steps 1-21). These procedures are based on basic guidance found in Paragraph 111C of the 2-CRP Manual and other parts as appropriate

Section 10 - Training of Staff

FSA and NRCS will train federal staff as appropriate for this project.

Section 11 - Communication Plan

An Outreach and Education Communication Plan Workgroup will be formed in the targeted watershed. The workgroup will consist of at least one District Board member from the District(s) in which the watershed lies, AGFC Fisheries/Stream Team Coordinator, AFC Forester, Conservation District staff, County Extension Agent from each county, and others as necessary to assist. With advice from Conservation District staff, farmer/ranchers seen as community leaders representing all important facets of local agriculture will also be requested to assist. Additional members may represent local recreational interests and officials of towns who use the water for a drinking water supply or any entities concerned with water quality.

The communication plan will be developed with the goal of providing local communities with the communications, education, and marketing support to ensure success of the CREP program throughout the selected areas. The following objectives will be important in meeting that goal:

- Obtain 100% awareness of the CREP program among landowners with degraded or threatened riparian areas in the selected watersheds,
- Provide 100% of the aforementioned landowners with information about economic and environmental benefits of riparian buffer protection,
- Create a positive response to CREP program in the community affected by the CREP (including not only agriculture producers eligible for the program, but water users of downstream reservoirs, and state tax payers in general),
- Develop or otherwise provide resources and materials to help promote and enlist cooperators in the CREP program,
- Build and maintain a coalition of Federal, State, and most importantly, local stakeholders to promote the program,
- Identify methods to maximize riparian protection beyond the life of, boundaries assigned to, and resources available through the proposed CREP program, and
- Additional objectives determined by the local Watershed Group, once it has been assembled.

The communication plan will recognize the following motivators to enrollment, and possibly identify additional motivators, based on personal knowledge of the watershed and community:

- To conserve natural resources including soil, forests, and wildlife,
- To improve the land and its value,
- To improve water quality,
- To improve farm productivity, either through improved profits, or decreased work maintaining marginal lands,
- To reduce the likelihood of additional lawsuits and/or future regulations,
- Increased incentives for installation and maintenance of conservation practices, and
- To work cooperatively as a watershed unit, including Oklahoma members.

The communications plan will recognize the following barriers to enrollment (and possibly additional ones based on more intimate knowledge of the local community and its needs) and seek ways to minimize the effect of these barriers:

- Investment of time and money,
- Ever increasing costs of implementation and maintenance,
- Hesitation to commit to a long-term program that may restrict ability to use or sell your land,
- Increasing pressure to develop land in northwest Arkansas, northeast Oklahoma, and
- Government guidelines.

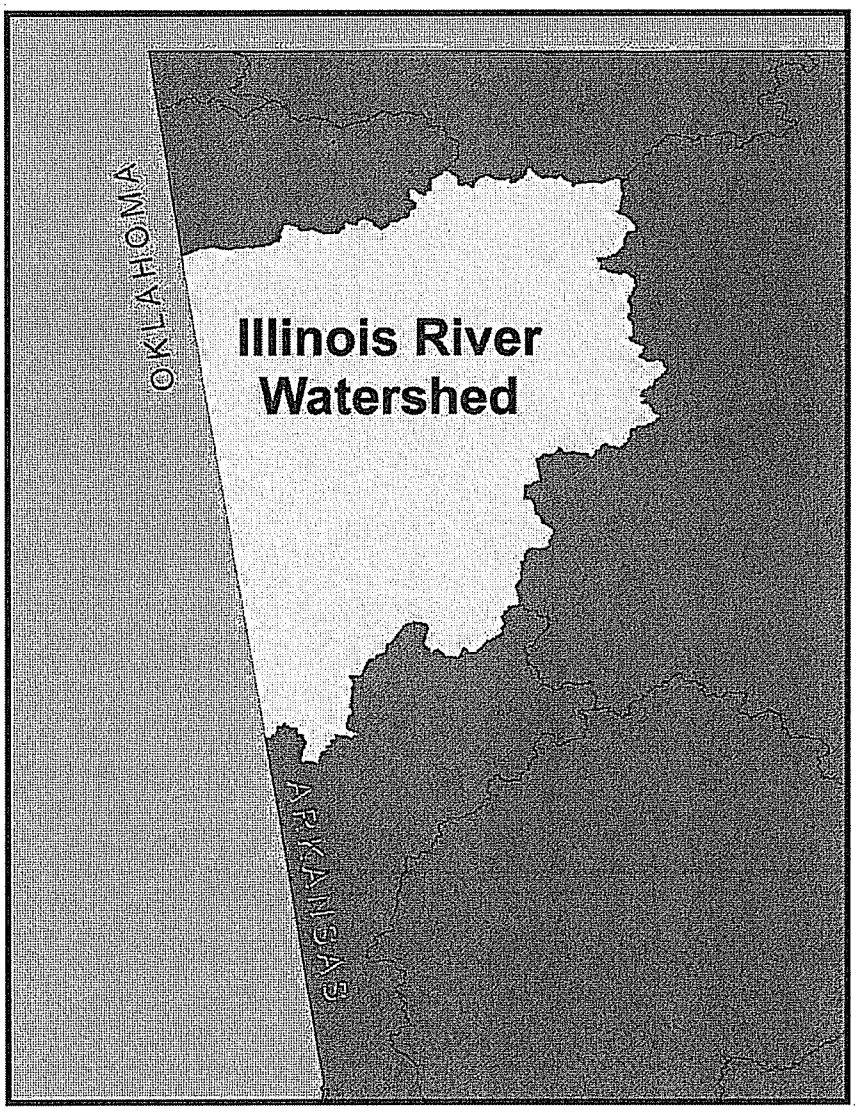
The communications plan will describe the development and/or use of the following tools and materials:

- Door-to-door presentations and phone calls
- Brochures,
- Fact Sheets,
- Riparian Management Handbook,
- Press releases, newspaper articles, radio spots,
- Signs,
- Events, activities, tours, presentations and displays at public meetings,
- Mail outs,
- Additional tools as determined by the Watershed Advisory Group, and
- Links from agency, NGO, and local web sites to the mentioned information in electronic form.

Attachment A

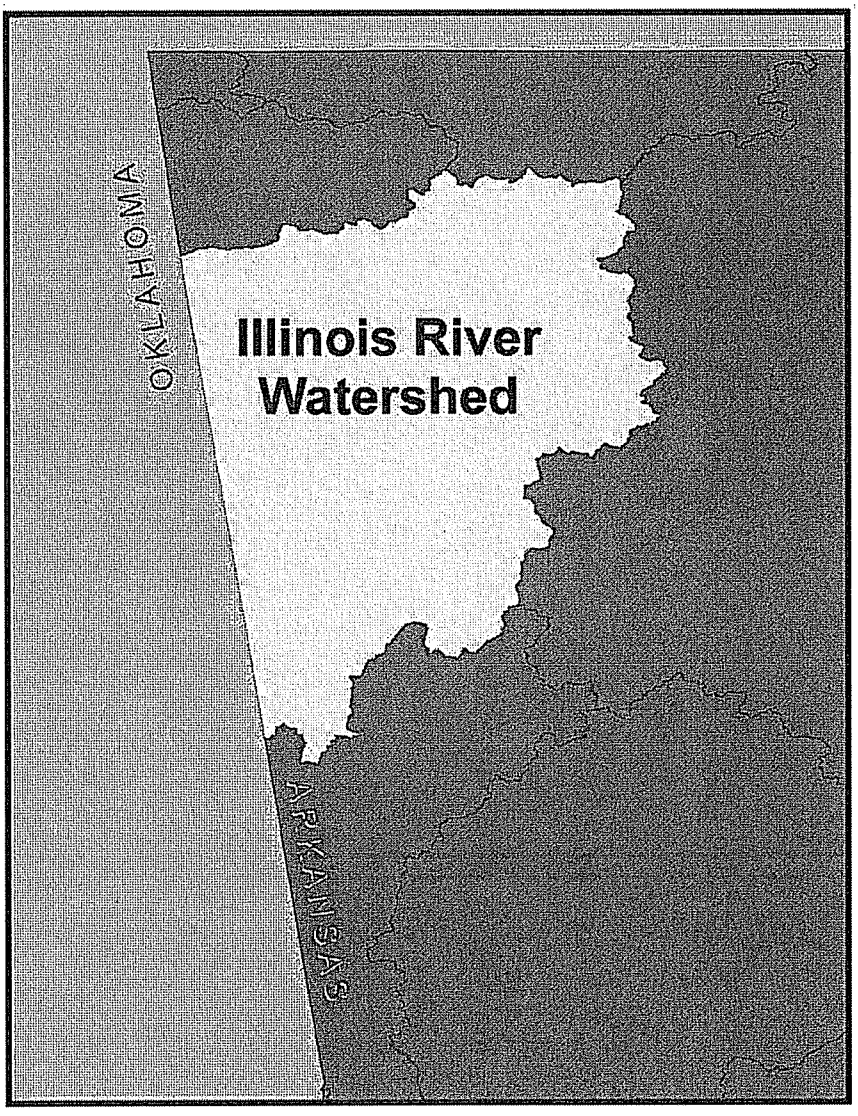
2006 Program Cost List

(Not included in draft)



Attachment B

Illinois River CREP Program Procedure



Step	Implementers	Responsibilities
1	FSA, NRCS	FSA explains the program and the practices to the landowner. NRCS may assist with an explanation of technical aspects of practices as requested by applicants (including State Tax Credit options).
2	Producer	The producer is responsible for indicating the area offered for the program and estimated acres, identifying the application area as near as can be determined on aerial photography.
3	FSA	FSA determines: producer eligibility (See Paragraph 82); basic land and practice eligibility criteria (See Paragraph 112); and program policy and practice requirements (See Exhibit 9). This eligibility determination is not a determination of final approved acres. If all these are not met, then FSA does not forward the CRP-2C to NRCS.
4	FSA	FSA fills in all items on the CRP-2C except items 2, 3B, 6, 14A-F on cropland, and 17A-F on cropland (See Paragraph 138C).
5	FSA	FSA subdivides fields where partial field practices are offered according to existing policy (see Paragraph 138C, CRP-2C Item 22). Assigned field numbers will be indicated on a map and the CRP-2C.
6	FSA, NRCS	FSA forwards completed CRP-2C to NRCS along with an aerial photograph (arc-view maps are preferable where capability exists) delineating the acres initially determined to be eligible. Only areas eligible for the continuous CRP practices should be included (See Paragraph 138C Item 24B). The area marked should identify the partial field area being offered as specifically as possible so that NRCS employees will know which parts of a field are to be evaluated. Those practices that have a limited width that cannot be exceeded without documentation by NRCS should indicate only the initial width (i.e. 180 ft. for CP-22). A producer signature on CRP-2C is not authorized prior to forwarding the form to NRCS at this point since final eligibility, needs, location, and acreage have not yet been established. Note: Both **FSA and NRCS** should notify the producer that NRCS may identify additional eligible area if the producer desires, and the additional area is needed to address resource concerns.
7	NRCS	NRCS will consult with the producer to establish the final width where appropriated and notify FSA of any changes in width by providing a written memo. Where no changes are to be made, an NRCS employee may either initial next to each eligible acreage in item 24B or provide notice in a written memo that acres were reviewed and no changes are indicated.

8	NRCS, TSP (Technical Service Provider)	NRCS or TSP (Arkansas Game and Fish Commission or Arkansas Forestry Commission) makes a mandatory site visit to determine whether: the offered land is suitable for the practice offered; the practice offered is needed and feasible to solve the resource concern (See Exhibit 9); and whether the existing cover is functioning as the practice offered.
9	NRCS	When evaluating a site for CP-22 or CP-29, NRCS may determine an additional width is needed for water quality purposes. NRCS employees may also observe reasons why the offered acreage may not be eligible for the practice or the eligible acres need to be adjusted. The changes will be clearly communicated to FSA by written memo, or by making notations of additional widths on the map provided by FSA. Any GPS coordinates documented by NRCS for revised practice boundaries may be provided to FSA electronically by downloading directly to their computer. In order to provide accurate location information, top-of-bank will be identified for these practices, using either GPS coordinates or marking with flags.
10	NRCS	NRCS may provide information to FSA to aid in conducting a measurement service on all partial field practices. This can be accomplished by downloading GPS coordinates directly to the FSA computer to allow an in-office measurement or by flagging field boundaries using materials that will remain visible above existing vegetation so that FSA can conduct a field measurement service. A complete polygon must be provided based either on top-of-bank where other vegetation is not present, or edge of existing vegetation where it is present.
11	NRCS	Once NRCS completes their responsibilities described above, including filling in items 14A-D and 17 A-D for cropland on the CRP-2C, the form and any supporting documentation is returned to FSA.
12	FSA	FSA finalizes the measurement service and completes the remaining items on the CRP-2C and the CRP-1 with the landowner, notifies the landowner of acceptance, and explains the process for finalizing the program contract, including the need to get a conservation plan through NRCS. Final eligible acres will be indicated if necessary by correcting item 24 on the CRP-2C.
13	FSA	FSA returns a copy of the signed CRP-2C and the CRP-1 to NRCS to begin the planning process.

14	NRCS	NRCS meets with the landowner and writes the conservation plan and/or forwards a request to the appropriate TSP, if applicable, for a practice plan which will be integrated into the conservation plan (See National Planning Procedures Handbook, FOTG Sections III – V, and GM 180 Part 409). The plan will include NRCS-CPA-52 (This is not the AR-NRCS-CPA-52 used for other conservation planning) developed as a part of the planning process, and all other appropriate forms.
15	TSP, NRCS	If a TSP is used for plan development, the TSP will return the plan to NRCS. In all cases where the AGFC or AFC is writing a portion of the plan, NRCS is responsible for incorporating that information into the Conservation Plan.
16	NRCS, Conservation District	NRCS and Conservation District will approve the final conservation plan and forward the completed conservation plan with appropriate signatures to FSA
17	County Committee	The County Committee approves the final plan and the CRP-1.
18	FSA	FSA issues AD-862 to NRCS followed by an AD-245 to landowner.
19	NRCS	NRCS will, as part of its technical responsibility, assist the landowner in laying out the boundaries of practices or assist in determining the location for placement of "T" posts for CP-22 and CP-29 using the same GPS coordinates provided to FSA or as otherwise marked in the field. This will be done at a time convenient to both parties prior to practice installation. Since applicants can start implementation of a practice at their own risk prior to approval of the CRP-1, this activity could possibly be accomplished at the same time step 9 in Processing the Offer is carried out provided existing crops or other situations do not prevent it. Notice of the right to install 'T' posts prior to contract approval will be provided to the applicant by FSA.
20	NRCS, TSP	NRCS or TSP assists the landowner with practice installation, documents the conservation plan, and completes the AD-862 for FSA.
21	FSA	FSA processes the payment request from the landowner.
22	FSA	FSA provides copies of CRP-1, CRP-2, AD-862, AD-245, CRPO, and appropriate State paperwork (State Incentive Payment Application, Vendor Profile, W-9, and optional Direct Deposit Authorization form) to producer.

23	Producer	Receives project documentation from FSA and sends copies of: CRP-1, CRP-2, AD-862, AD-245, CRPO, bills, State incentive paperwork (State Incentive Payment Application, Vendor Profile, W-9, optional Direct Deposit Authorization form), and Tax Credit Application (if applicable) to ANRC for processing.
24	ANRC	Enters final contract information into State CREP database and processes State Tax Credit paperwork if applicable. Forwards appropriate paperwork to Department of Finance and Administration (DF&A) so State Incentive Payment and State Tax Credit can be issued to producer(s).
25	DF&A	Processes paperwork and makes State Incentive Payment to producer(s).
26	NRCS	County Office makes spot checks according to 2-CRP for CRP-1compliance, and notifies FSA of contract violations.
27	FSA	Issues annual rental payments when authorized and after final status review. Informs ANRC of contract violations, and other significant changes to CREP contracts.
28	ANRC	By January 1st of each year, beginning in 2008, ANRC provides a report to the USDA FSA summarizing the status of enrollments under CREP and progress on fulfilling the other commitments of this program.

APPENDIX B
RELEVANT LAWS AND REGULATIONS

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APPENDIX B—RELEVANT LAWS AND REGULATIONS

This following is a non-exclusive and brief discussion of the relevant laws and regulations that form the basis of the programmatic environmental analysis for the proposed Conservation Reserve Enhancement Program agreement for the Illinois River Watershed in Arkansas.

Clean Air Act

The *Clean Air Act* (42 *United States Code* [USC] parts 7401 et seq., 1999) regulates air emissions from area, stationary, and mobile sources, and authorizes the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and the environment. Sections 107 and 110 of the *Clean Air Act* give each State responsibility for ensuring that pollution levels within their borders are consistent with NAAQS.

Clean Water Act

The *Clean Water Act* (CWA) (33 USC parts 1251 et seq., 2000), formally known as the *Federal Water Pollution Control Act*, was passed to restore and protect the waters of the U.S. CWA established the basic structure for regulating discharges of pollutants into the waters of the U.S. It continued requirements to set water quality standards for all contaminants in surface waters and gave EPA the authority to implement pollution control programs. In addition, CWA recognized the need for planning to address the critical problems posed by non-point source pollution, such as that generated by agricultural production (e.g., runoff and leaching of pesticides and fertilizers).

Endangered Species Act

The *Endangered Species Act* (ESA) (16 USC parts 1531 et seq., 1988) was enacted to conserve threatened and endangered species and the critical habitats in which they exist. When a species is designated as threatened with extinction, a recovery plan that includes restrictions on cropping practices, water use, and pesticide use is developed to protect the species from further population declines. All Federal agencies are required to implement ESA by ensuring that their actions do not jeopardize the continued existence of any listed species. Section 7 of ESA requires that project areas must be checked against U.S. Fish and Wildlife Service and State listings of threatened and endangered species and critical habitat.

ESA defines an endangered species as one that is in danger of extinction throughout all or a significant portion of its range. Threatened means a species is likely to become endangered within the foreseeable future. These designations may be applied to all species of plants and animals, except pest insects. A species may be threatened at the State level, but that same designation does not necessarily apply across the U.S., as species numbers may be greater in other States. Critical habitat is defined by ESA as areas that are essential to the conservation of listed species.

Executive Order 11514, Protection and Enhancement of Environmental Quality

Executive Order (EO) 11514, *Protection and Enhancement of Environmental Quality* (35 *Federal Register* [FR] 4247, 1977), mandated the Federal government to provide leadership in protecting and enhancing the quality of the environment to sustain and enrich human life. Federal agencies are required to initiate measures needed to direct their policies, plans, and programs so as to meet national environmental goals.

Executive Order 11988, Floodplain Management

EO 11988, *Floodplain Management* (42 FR 26951, 1979), compels Federal agencies to restore and preserve the natural and beneficial values served by floodplains by: 1) avoiding short-term and long-term adverse impacts associated with the occupancy and modification of floodplains; and 2) avoiding direct and indirect support of floodplain development wherever there is a practicable alternative. Federal agencies are required to take actions that will reduce the risk of flood loss and minimize the impact of floods to human safety, health, and welfare.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (59 FR 32, 1995), requires Federal agencies to make achieving environmental justice part of their mission by considering whether their programs, policies, and activities may have adverse impacts to minority or low-income populations. This EO emphasizes the importance of the public participation process, directing each Federal agency to provide opportunities for community input in the *National Environmental Policy Act* (NEPA) process by providing access to public documents and furnishing notices and hearings.

Food Security Act of 1985

The Conservation Reserve Program (CRP) was established under Title XII of the *Food Security Act of 1985* (16 USC part 3831, 1996). The purpose of CRP is to cost-effectively assist owners and operators in conserving and improving soil, water, and wildlife resources on their farms and ranches. Highly erodible and other environmentally sensitive acreage, normally devoted to the production of agricultural commodities, is converted to a long-term resource conservation cover. Conservation compliance provisions for highly erodible land are commonly referred to as *Sodbuster* provisions. Wetland conservation provisions, commonly known as *Swampbuster* provisions, help preserve the environmental functions and values of wetlands, including flood control, sediment control, groundwater recharge, water quality, wildlife habitat, recreation, and aesthetics.

The *Farm Security and Rural Investment Act of 2002*, commonly known as the *2002 Farm Bill*, authorizes CRP through 2007 and raises the overall enrollment cap to 39.2 million acres (16 USC part 3831, 1996). CREP is authorized pursuant to the *Federal Agriculture Improvement and Reform Act of 1996* and is a subset of CRP (7 USC parts 7201 et seq., 1998).

National Environmental Policy Act

NEPA is intended to help Federal officials make decisions that are based on consideration of the environmental consequences of their actions, and to take actions that protect, restore, and enhance the environment. NEPA mandates that Federal agencies consider and document the impacts that major projects and programs may have to the environment. The Council on Environmental Quality provides implementing regulations (40 *Code of Federal Regulations* [CFR] parts 1500 et seq., 2006). NEPA guidance for the Farm Service Agency is obtained through *Environmental Quality and Related Environmental Concern—Compliance with the National Environmental Policy Act* (7 CFR parts 799 et seq., 2007).

National Historic Preservation Act

The *National Historic Preservation Act* (NHPA) (16 USC part 470, 2000) establishes as Federal policy the protection of historic properties and their values. Subsequent amendments designate the State Historic Preservation Office (SHPO) or the Tribal Historic Preservation Office (THPO) as the party responsible for administering programs in the States or reservations. Federal agencies are required to consider the effects of their undertakings on historic resources, and to give SHPO/THPO a reasonable opportunity to

comment on those undertakings. NHPA implementing regulations (36 CFR parts 800.3–800.13, 2006) govern compliance with Section 106 of NHPA, which must be followed in planning any Federal agency activity and in the ongoing management of agency resources.

REFERENCES

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APPENDIX C
SUMMARY OF CONSERVATION PRACTICES

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APPENDIX C—SUMMARY OF CONSERVATION PRACTICES

Following this paragraph is a summary of Farm Service Agency (FSA) conservation practices (CPs) for the proposed Conservation Reserve Enhancement Program (CREP) agreement for the Illinois River Watershed in Arkansas as described in *Agricultural Resource Conservation Program for State and County Offices* (FSA 2007) commonly referred to as 2-CRP (Revision 4). These National CPs have been modified specifically for the Arkansas CREP agreement as detailed in the following summary.

CP22—Riparian Buffer and CP29—Marginal Pastureland Wildlife Habitat Buffer

Description:
Detailed descriptions of CP22 and CP29 are provided in 2-CRP (Revision 4) (FSA 2007), exhibit 9 pages 86, and 135 respectively.

Modifications:

Stream bank stabilization will be implemented before riparian vegetation is restored or established and will be allowed at a cost-share rate of 50 percent.

The minimum combined width of zones 1 and 2 will be equal to 30 percent of the width of the geomorphic floodplain but never less than 50 feet or greater than 100 feet. This is the minimum width for the buffer to function properly and the landowner must install this much. The landowner can then choose to install additional buffer out to a 300-foot program maximum (CP22). Additional buffer can be enrolled under the infeasible to farm/graze definition (16 *United States Code* [USC] part 3831, 1996).

The infeasible to farm/graze definition will also apply to CP29. Producers may request a waiver to enroll infeasible to farm/graze in excess of 25 percent.

Winter feeding facilities composed of a covered heavy use area (Natural Resources Conservation Service [NRCS] Practice 588—Roof Runoff Structure) combined with a dry manure storage area (NRCS Practice 313—Waste Storage Facility) and a cement water tank will be allowed at a cost-share rate of 50 percent. These facilities will be constructed out of the geomorphic floodplain. They will be a combination of NRCS practices 561 and 313, with a roof over the heavy use area.

Alternative water sources may be developed within 1,500 feet of the edge of zone 3 with county committee approval to encourage upland pasture use for grazing and floodplain pasture use for haying.

Watering facilities will allow up to 1,500 feet of pipeline with county committee approval.

The maximum dollar amount allowed for water development, water facilities, and pipeline ($3,000, $2,000, and $2,000 respectively) will be per 0.5 mile of stream rather than per contract.

When two eligible tracts are separated by a wooded area, fence through the treed area will be allowed at a cost-share rate of 50 percent.

REFERENCE

16 USC part 3831. 1996. "Conservation Reserve," as amended. *United States Code*. U.S. Government Printing Office via GPO Access. Available via http://www.gpoaccess.gov/uscode/index.html. Accessed February 23, 2006.

FSA. 2007. *Agricultural Resource Conservation Program for State and County Offices*, Revision 4, Amendments 1 through 10, Farm Service Agency, U.S. Department of Agriculture. Washington, Available at http://www.fsa.usda.gov/Internet/FSA_File/2-crp.pdf. Accessed April 11, 2007.

APPENDIX D
NET PRESENT VALUE ANALYSIS

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APPENDIX D—NET PRESENT VALUE ANALYSIS

Data used for the net present value analysis for the proposed Conservation Resource Enhancement Program agreement for the Illinois River Watershed in Arkansas over 15 years is shown on the following page of this appendix.

Year	Discount Factor	Establishment Costs	Cost Share (FSA)	Wetlands Restoration Cost Share	SIP	PIP	TNC Incentive Payment	Rental Rate	Incentive Payment	Maintenance	Lost Jobs	Lost Farm Income	Sum	NPV
2007	1.00	-1,718,750	859,375	195,938	625,000	242,000	1,000,000	256,250	192,188	32,920	-122,000	-438,777	1,124,142	1,124,142
2008	0.95							256,250	192,188	32,920	-122,000	-438,777	-79,420	-75,449
2009	0.90							256,250	192,188	32,920	-122,000	-438,777	-79,420	-71,677
2010	0.86							256,250	192,188	32,920	-122,000	-438,777	-79,420	-68,093
2011	0.81							256,250	192,188	32,920	-122,000	-438,777	-79,420	-64,688
2012	0.77							256,250	192,188	32,920	-122,000	-438,777	-79,420	-61,454
2013	0.74							256,250	192,188	32,920	-122,000	-438,777	-79,420	-58,381
2014	0.70							256,250	192,188	32,920	-122,000	-438,777	-79,420	-55,462
2015	0.66							256,250	192,188	32,920	-122,000	-438,777	-79,420	-52,689
2016	0.63							256,250	192,188	32,920	-122,000	-438,777	-79,420	-50,055
2017	0.60							256,250	192,188	32,920	-122,000	-438,777	-79,420	-47,552
2018	0.57							256,250	192,188	32,920	-122,000	-438,777	-79,420	-45,174
2019	0.54							256,250	192,188	32,920	-122,000	-438,777	-79,420	-42,916
2020	0.51							256,250	192,188	32,920	-122,000	-438,777	-79,420	-40,770
2021	0.49							256,250	192,188	32,920	-122,000	-438,777	-79,420	-38,731
TOTAL			859,375				1,000,000	3,843,750		493,800	-1,830,005	-6,581,662	12,258	351,051
NPV per Acre														18

Assumptions:

1) Discount rate of 5%
2) Rental rate is 100% of established county rates
3) Maintenance fee of $4/acre
4) Maintenance fee of $6-9 for CP22
5) USDA covers 50% of establishment costs
6) An additional 25% of establishment costs provided for CP-23 and CP-23A
7) SIP is $100/acre
8) PIP is 40% of eligible cost share
9) The Nature Conservancy provides a one-time conservation easement payment of $160/acre